LISTING OF CLAIMS:

The following listing according to claims replaces all previous versions and listings in the present application.

Claims 1 – 39 (Canceled)

40. (Previously Presented) A hybrid payload satellite for reducing a communication latency between a plurality of user terminals and a content provider, the hybrid payload satellite including an antenna having an uplink section and a downlink section, an uplink electronics unit, and connection resources, the hybrid payload satellite capable of handling a digital payload and an analog payload, the hybrid payload satellite comprising:

a forward payload section including a forward processing module and a forward amplifier, the forward payload section for handling the analog payload; and

a return payload section including a return processing module having an arbitration processor and a return amplifier, the return payload section for handling the digital payload,

wherein the arbitration processor is configured to:

intercept a request from one of the plurality of user terminals on the uplink section for access to a connection with the content provider; and

one of grant the intercepted request and deny the intercepted request based on the resources available for transmission to the content provider.

41. (Previously Presented) The hybrid payload satellite according to claim 40, wherein the forward amplifier includes a forward traveling wave tube amplifier (TWTA) and the return amplifier includes a return TWTA.

42. (Previously Presented) The hybrid payload satellite according to claim 40, wherein the arbitration processor is further configured to transmit a message to the plurality of user terminals granting or denying access to the connection resources.

43. (Previously Presented) The hybrid payload satellite according to claim 40, wherein the arbitration processor is further configured to not acknowledge a collision between multiple requests from the plurality of user terminals.

44. (Previously Presented) The hybrid payload satellite according to claim 40, wherein the arbitration processor includes a demand assigned multiple access (DAMA) processor and is further configured to distinguish a signal from noise in a DAMA channel associated with the connection resources using a pseudonoise (PN) sequence correlator.

45. (Previously Presented) The hybrid payload satellite according to claim 40, wherein the arbitration processor includes a demand assigned multiple access (DAMA) processor and further includes a multichannel demodulator configured to recover and decode a DAMA request message.

46. (Previously Presented) The hybrid payload satellite according to claim 45, wherein the multichannel demodulator configured to generate a reply to the DAMA request message and multiplex the reply into a downlink signal.

47. (Previously Presented) The hybrid payload satellite according to claim 45, wherein the multichannel demodulator configured to generates a special downlink signal for one of the plurality of user terminals making the DAMA request message.

48. (Previously Presented) The hybrid payload satellite according to claim 40, wherein the arbitration processor is configured to operate in accordance with one of a demand assigned multiple access (DAMA) protocol, a frequency division multiple access (FDMA) protocol, a time division multiple access (TDMA) protocol, a carrier detect multiple access (CDMA) protocol, carrier sense multiple access/collision detection (CSMA/CD) protocol, and a hybrid protocol.

49. (Currently Amended) A hybrid payload satellite for reducing a communication latency between a plurality of user terminals and a content provider, comprising:

an antenna having an uplink section and a downlink section;

an analog payload section including an analog processing module and an analog amplifier, the analog payload section for performing entirely analog payload processing on downlink signals from ~~the content provider to~~ at least one of the plurality of user terminals to the content provider;

a digital payload section including a digital processing module and a digital amplifier, the digital payload section for performing entirely digital payload processing on uplink signals from the content provider to at least one of the plurality of user terminals ~~to the content provider~~; and

an arbitration processor configured to:

intercept a request from one of the plurality of user terminals on the uplink section for access to a connection with the content provider; and

grant or deny the intercepted request based on the resources available for transmission to the content provider.

50. (Previously Presented) The hybrid payload satellite according to claim 49, wherein the analog amplifier includes an analog traveling wave tube amplifier (TWTA) and the digital amplifier includes a digital TWTA.

51. (Previously Presented) The hybrid payload satellite according to claim 49, wherein the arbitration processor is formed in the digital payload section.

52. (Previously Presented) The hybrid payload satellite according to claim 49, wherein the arbitration processor is further configured to transmit a message to the plurality of user terminals granting or denying access to the connection resources.

53. (Previously Presented) The hybrid payload satellite according to claim 49, wherein the arbitration processor is further configured to not acknowledge a collision between multiple requests from the plurality of user terminals.

54. (Previously Presented) The hybrid payload satellite according to claim 49, wherein the arbitration processor includes a demand assigned multiple access (DAMA) processor and is further configured to distinguish a signal from noise in a DAMA channel associated with the connection resources using a pseudonoise (PN) sequence correlator.

55. (Previously Presented) The hybrid payload satellite according to claim 49, wherein the arbitration processor includes a demand assigned multiple access (DAMA) processor and further includes a multichannel demodulator configured to recover and decode a DAMA request message.

56. (Previously Presented) The hybrid payload satellite according to claim 55, wherein the multichannel demodulator configured to generate a reply to the DAMA request message and multiplex the reply into a downlink signal.

57. (Previously Presented) The hybrid payload satellite according to claim 55, wherein the multichannel demodulator configured to generates a special downlink signal for one of the plurality of user terminals making the DAMA request message.

58. (Previously Presented) The hybrid payload satellite according to claim 49, wherein the arbitration processor is configured to operate in accordance with one of a demand assigned multiple access (DAMA) protocol, a frequency division multiple access (FDMA) protocol, a time division multiple access (TDMA) protocol, a carrier detect multiple access (CDMA) protocol, carrier sense multiple access/collision detection (CSMA/CD) protocol, and a hybrid protocol.

59. (Previously Presented) The hybrid payload satellite according to claim 49, wherein the analog payload processing is bent pipe payload processing.